<u>Listing of the Claims</u>

1. (Original)   An apparatus for generating a gamut false color display having a plurality of pixels comprising:

means for deriving a gamut error signal from an input video signal; and

means for generating the gamut false color display from the gamut error signal and a luminance component of the input video signal, each pixel being in monochrome except when the gamut error signal indicates a gamut error, in which case a false color is provided in lieu of the monochrome for each pixel associated with the gamut error.

2. (Original)   The apparatus as recited in claim 1 wherein the deriving means comprises:

means for generating a chrominance magnitude signal from the input video signal; and

means for combining the chrominance magnitude signal with the luminance component to produce the gamut error signal.

3. (Original)   The apparatus as recited in claim 2 wherein the combining means comprises:

means for additively and subtractively combining the chrominance magnitude signal with the luminance component to produce a composite signal; and

means for comparing the composite signal with a plurality of threshold values to produce the gamut error signal.

4. (Original)   The apparatus as recited in claim 1 wherein the deriving means comprises:

means for converting the input video signal into a plurality of component signals; and

means for comparing the component signals with a plurality of threshold values to produce the gamut error signal.

5. (Original)   The apparatus as recited in claim 1 wherein the deriving means comprises:

means for converting the input video signal into a plurality of component signals; and

means for comparing a selected one of the component signals with a plurality of threshold values to produce the gamut error signal.

6. (Previously Presented)   The apparatus as recited in claim 1 further comprising means for capturing a portion of the input video signal in response to the gamut error.

7. (Original)   The apparatus as recited in claim 6 wherein the capturing means comprises means for timestamping the portion.

8. (Original)   The apparatus as recited in claim 6 further comprising means for counting a number of gamut errors within the portion to produce a gamut error count such that the portion is captured by the capturing means when the gamut error count exceeds a specified value.

9. (Original)   The apparatus as recited in claims 3, 4 or 5 wherein the plurality of threshold values are selected from the group consisting of a near high gamut error value, a high gamut error value, a near low gamut error value and a low gamut error value.

10. (Original)   The apparatus as recited in claim 9 wherein the false color comprises a first color for a gamut error high state, a second color for a gamut error near high or near low state and a third color for a gamut error low state, the first, second and third colors being different from monochrome.

11. (Original)   The apparatus as recited in claim 6 further comprising means for providing persistence for the portion.

12. (Original)   The apparatus as recited in claim 11 wherein the persistence is variable.

13. (Original)   The apparatus as recited in claim 12 wherein the persistence is fixed.

14. (Original)   The apparatus as recited in claims 11, 12 or 13 wherein the persistence is reset when the portion is captured.

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Original)   A method of generating a gamut false color display having a plurality of pixels comprising the steps of:

deriving a gamut error signal from an input video signal; and

generating the gamut false color display from the gamut error signal and a luminance component of the input video signal, each pixel being in monochrome except when the gamut error signal indicates a gamut error, in which case a false color is provided in lieu of the monochrome for each pixel associated with the gamut error.

19. (Original)   The method as recited in claim 18 wherein the deriving step comprises the steps of:

generating a chrominance magnitude signal from the input video signal; and

combining the chrominance magnitude signal with the luminance component to produce the gamut error signal.

20. (Original)   The method as recited in claim 19 wherein the combining means comprises the steps of:

additively and subtractively combining the chrominance magnitude signal with the luminance component to produce a composite signal; and

comparing the composite signal with a plurality of threshold values to produce the gamut error signal.

21. (Original)   The method as recited in claim 18 wherein the deriving step comprises the steps of:

converting the input video signal into a plurality of component signals; and

comparing the component signals with a plurality of threshold values to produce the gamut error signal.

22. (Original)   The method as recited in claim 18 wherein the deriving step comprises the steps of:

        converting the input video signal into a plurality of component signals; and

        comparing a selected one of the component signals with a plurality of threshold values to produce the gamut error signal.

23. (Previously Presented)   The method as recited in claim 18 further comprising the step of capturing a portion of the input video signal in response to the gamut error.

24. (Original)   The method as recited in claim 23 wherein the capturing step comprises the step of timestamping the portion.

25. (Original)   The method as recited in claim 23 further comprising the step of counting a number of gamut errors within the portion to produce a gamut error count such that the portion is captured by the capturing step when the gamut error count exceeds a specified value.

26. (Original)   The method as recited in claims 20, 21 or 22 wherein the plurality of threshold values are selected from the group consisting of a near high gamut error value, a high gamut error value, a near low gamut error value and a low gamut error value.

27. (Original)   The method as recited in claim 26 wherein the false color comprises a first color for a gamut error high state, a second color for a gamut error near high or near low state and a third color for a gamut error low state, the first, second and third colors being different from monochrome.

28. (Original)   The method as recited in claim 18 further comprising the step of providing persistence for the portion.

29. (Original)   The method as recited in claim 28 wherein the persistence is variable.

30. (Original)   The method as recited in claim 28 wherein the persistence is fixed.

31. (Original)   The method as recited in claims 28, 29 or 30 wherein the persistence is reset when the portion is captured.